

WHAT IS CLAIMED IS:

1. A method for associating a switched virtual circuit (SVC) connection request in a high speed data network with a network subscriber, the method comprising:

receiving a signaling protocol message requesting the SVC connection from the subscriber at an access port;

determining whether the signaling protocol message contains authentication data to authenticate the subscriber; and

when the subscriber is authenticated, associating the SVC connection request with data from an account corresponding to the subscriber.

2. The method for associating an SVC connection request according to claim 1, further comprising:

retrieving service policies from the subscriber account;

determining from the service policies whether the subscriber is entitled to access the network from the access port, as requested; and

enabling access to the high speed network when the service policies entitle the subscriber to make the requested access.

3. The method for associating an SVC connection request according to claim 1, wherein the access port is different from a permanent access port of the subscriber.

4. The method for associating an SVC connection request according to claim 1, further comprising registering an address of the access port in the network by substituting the address of the access port for an existing subscriber address.

5. A method for associating a switched virtual circuit (SVC) connection request from one of a plurality of subscribers at a single access port in a high speed data network, the method comprising:

receiving a signaling protocol message requesting the SVC connection from the access port, the signaling protocol message comprising a plurality of data fields;  
retrieving authentication data from at least one of the plurality of data fields;  
comparing the retrieved authentication data with a plurality of network subscriber accounts; and

associating the SVC connection request with the network subscriber account corresponding to the authentication data;

wherein at least one other subscriber of the plurality of subscribers can request simultaneously an SVC connection from the same access port.

6. The method for associating an SVC connection request according to claim 5, further comprising:

retrieving from a second one of the plurality of data fields a network access port address corresponding to the access port; and

changing a registration address associated with the network subscriber account from an original access port address to the network access port address.

7. The method for associating an SVC connection request according to claim 6, further comprising:

receiving at least one connection request from another user of the high speed network, the request directed to the subscriber; and

terminating the at least one connection request to the registration address.

8. A method for associating a network policy with a subscriber in an asynchronous transfer mode (ATM) network, the network policy including rights for establishing a switched virtual circuit (SVC) connection, the method comprising:

interfacing between the ATM network and the subscriber through an ATM compatible access port;

receiving at the ATM network a conventional signaling protocol message requesting the SVC connection;

determining whether the signaling protocol message contains a first identification number associated with the subscriber;

when the signaling protocol message contains the first identification number, determining whether the signaling protocol message contains a second identification number that correctly corresponds to the first identification number;

when the signaling protocol message contains the correctly corresponding second identification number, retrieving the service policy from an account associated with the first identification number and the second identification number;

determining whether the retrieved service policy permits the subscriber to establish an SVC connection; and

when the retrieved service policy permits the subscriber to establish an SVC connection, establishing the SVC connection.

9. The method for associating a network policy with a subscriber in an ATM network according to claim 8, wherein the first identification number comprises a publicly known number associated with the subscriber and the second identification number comprises an encrypted private password associated with the first identification number.

10. The method for associating a network policy with a subscriber in an ATM network according to claim 8, the signaling protocol message comprising a SETUP message, the first identification number being contained in a first predetermined field of the SETUP message and the second identification number being contained in a second predetermined field of the SETUP message.

11. The method for associating a network policy with a subscriber in an ATM network according to claim 8, further comprising registering an address of the ATM compatible access port, the registering comprising:

retrieving the ATM compatible access port address from a signaling protocol message;

retrieving from a registration database registration data associated with the subscriber, the registration data comprising a predetermined ATM address; and

replacing the predetermined ATM address with the ATM compatible access port address retrieved from the signaling protocol message.

12. A method for registering an access port of a subscriber in a high speed data network, the method comprising:

establishing a connection between a subscriber terminal and a network registration database, the subscriber terminal accessing the high speed data network via the access port;

retrieving from the registration database a registration address associated with the subscriber; and

replacing the registration address with an address of the access port.

13. The method for registering an access port of a subscriber in a high speed data network according to claim 12, further comprising:

terminating connection requests directed to the subscriber at the address of the access port, indicated as the registration address associated with the subscriber.

14. The method for registering an access port of a subscriber in a high speed data network according to claim 12, further comprising:

prior to retrieving the registration address associated with the subscriber, authenticating the subscriber; and

when the subscriber is successfully authenticated, retrieving service policies corresponding to the subscriber.

15. The method for registering an access port of a subscriber in a high speed data network according to claim 12, wherein the address of the access port is different from an address of a preexisting access port of the subscriber.

16. The method for registering an access port of a subscriber in a high speed data network according to claim 15, further comprising:

replacing the registration address with the address of the preexisting access port prior to the subscriber disconnecting from the high speed network; and

terminating connection requests directed to the subscriber at the address of the preexisting access port, indicated as the registration address associated with the subscriber.

17. A system for processing a switched virtual circuit (SVC) connection request in a high speed data network, the system comprising:

a registration server that stores at least one identification number associated with a network subscriber;

a database that stores at least one policy defining permission to establish SVC connections; and

at least one switch in the high speed data network that accesses the registration server and the database;

wherein the switch is accessible by at least one access port, connectable to the switch, which enables the network subscriber to interface with the high speed data network from a subscriber terminal; and

wherein the switch receives a protocol message from the subscriber terminal requesting the SVC connection via the access port, accesses the registration server to determine whether the protocol message contains valid authentication data, retrieves the at least one policy associated with the network subscriber from the registration database when the protocol message contains valid authentication data, and establishes the SVC connection according to the at least one policy.

18. The system for processing the SVC connection request according to claim 17, wherein the access port is different from a previously established access port of the network subscriber.

19. The system for processing the SVC connection request according to claim 18, wherein the server registers an address of the access port in place of an address of the previously established access port associated with the ATM subscriber.

20. A system for processing services of a subscriber in an asynchronous transfer mode (ATM) network, including establishing a switched virtual circuit (SVC) connection, the system comprising:

a registration server that stores authentication data associated with the subscriber, the authentication data comprising an identification number and a password;

a service database that stores at least one ATM policy comprising establishing the SVC connection; and

at least one ATM switch that accesses the registration server and the service database, the ATM switch being connectable to an access port that enables the subscriber to interface with the ATM network from a subscriber terminal;

wherein the registration server determines whether a signaling protocol message requesting the SVC connection, received via the access port, includes the identification number and the password associated with the subscriber; and

wherein, when the protocol message includes the identification number and the password, the at least one ATM switch accesses the service database to determine the ATM service policies associated with the subscriber and processes the SVC connection request according to the ATM service policies.

21. The system for processing services of a subscriber in an ATM network according to claim 20, wherein the authentication data is contained in at least one of a plurality of predetermined fields of an ATM SETUP message of the signaling protocol message.

22. The system for processing services of a subscriber in an ATM network according to claim 21, wherein the registration server stores an address of the access port contained in one of a plurality of predetermined fields and substitutes the stored address of the access port for a preexisting address of another access port of the subscriber.

23. A system for registering an access port of a subscriber in an asynchronous transfer mode (ATM) network, the system comprising:

a registration server that stores an original port address as a registration address associated with a subscriber; and

at least one ATM switch in the ATM network that accesses the registration server, the ATM switch being connectable to at least one access port that enables the ATM subscriber to interface with the ATM network from a terminal;

wherein the ATM switch interfaces the terminal to the registration server via the access port; and

wherein, the registration server changes the registration address from the original port address to an address corresponding to the access port, such that subsequent ATM network connection requests directed to the subscriber are terminated at the terminal via the access port.

24. The system for registering an access port of a subscriber in an ATM network according to claim 23, wherein the registration server stores the address of the access port in place of the original port address when the ATM subscriber instructs the registration server to register the access port.

25. A computer readable medium for storing a computer program that associates a switched virtual circuit (SVC) connection request in a high speed data network with a network subscriber, the computer readable medium comprising:

a receiving source code segment that receives a signaling protocol message requesting the SVC connection from the subscriber at an access port;

an authentication source code segment that determines whether the signaling protocol message contains authentication data to authenticate the subscriber; and

an associating source code segment that associates the SVC connection request with data from an account corresponding to the subscriber when the subscriber is authenticated.

26. The computer readable medium for storing a computer program according to claim 25, further comprising:

a retrieving source code segment that retrieves service policies from the subscriber account;

a determining source code segment that determines from the service policies whether the subscriber is entitled to access the network from the access port, as requested; and

an enabling source code segment that enables access to the high speed network when the service policies entitle the subscriber to make the requested access.

27. The computer readable medium for storing a computer program according to claim 25, wherein the access port is different from a permanent access port of the subscriber.



28. The computer readable medium for storing a computer program according to claim 25, further comprising a registering source code segment that registers an address of the access port in the network by substituting the address of the access port for an existing subscriber address.

29. A computer readable medium for storing a computer program that registers an access port of a subscriber in a high speed data network, the computer readable medium comprising:

a connecting source code segment that establishes a connection between a subscriber terminal and a network registration database, the subscriber terminal accessing the high speed data network via the access port;

a retrieving source code segment that retrieves from the registration database a registration address associated with the subscriber; and

a replacing source code segment that replaces the registration address with an address of the access port.

30. The computer readable medium for storing a computer program according to claim 29, further comprising:

a terminating source code segment that terminates connection requests directed to the subscriber at the address of the network access port, indicated as the registration address associated with the subscriber.

31. The computer readable medium for storing a computer program according to claim 29, further comprising:

an authenticating source code segment that, prior to the retrieving source code segment retrieving the registration address associated with the subscriber, authenticates the subscriber; and

a service policy source code segment that retrieves a service policy corresponding to the subscriber when the subscriber is successfully authenticated in accordance with the authenticating source code segment.

32. The computer readable medium for storing a computer program according to claim 29, wherein the address of the access port is different from an address of a preexisting access port of the subscriber.

33. The computer readable medium for storing a computer program according to claim 29, further comprising:

a replacing source code segment that replaces the registration address with the address of the preexisting access port prior to the subscriber disconnecting from the high speed network; and

a terminating source code segment that terminates connection requests directed to the subscriber at the address of the preexisting access port, indicated as the registration address associated with the subscriber.